Basement

The basement is constructed in 900mm retaining wall sections as shown in Illustration 3, page 3. The panels are shown in Illustration 4 and the bending schedule in .

Structural calculations are in Appendix 1.

Material	Area (%/100)	Thickness (m)	R-Value per m	Element R-Value
Celcon Standard Blocks	0.98	0.075	6.67	0.49
FoamGlas Perinsul	0.02	0.070	23.81	0.03
FoamGlas T4	1	0.080	23.81	1.9
Structural Concrete	1	0.150	0.61	0.09
Celcon Hi-Ten	1	0.100	5.26	0.53
				3.05
			U-value	**0.33**

Table 1: Basement Heat Calculation

Information on Foamglas can be found at - http://www.foamglas.co.uk/building.htm

The technical approval for this family of products can be found in Appendix 3.

Foamglas blocks will be joined with the manufacturer's recommended P56 two part adhesive.

Foamglas joint with PC56 will provide the Radon barrier. See Appendix 4 for the manufacturer's statement.

80mm of Foamglas will be comprised of two layers of 40mm T4 Foamglas. The joints will be staggered with at least 50mm overlap. This detail is not required for Radon protection as PC56 adhesive is being used.

The structural engineering specification requires a load bearing strength of 100kN/m^2. Foamglas T4 has a working compressive strength of 400kN/m^2.

Foamglas will be used to surround the reinforced concrete parts of the retaining walls. This is shown in Illustration 1 and Illustration 2. A course of Foamglas Perinsul is used as the first course of the external 75mm block wall. This ensures the Foamglas jacket is continuous and therefore provides a DPC and bonding surface for the Foamglas T4 which wraps around the heel of the retaining wall.

Where Foamglas T4 is used vertically it will have a thickness of 80mm (2 layers of 40mm).

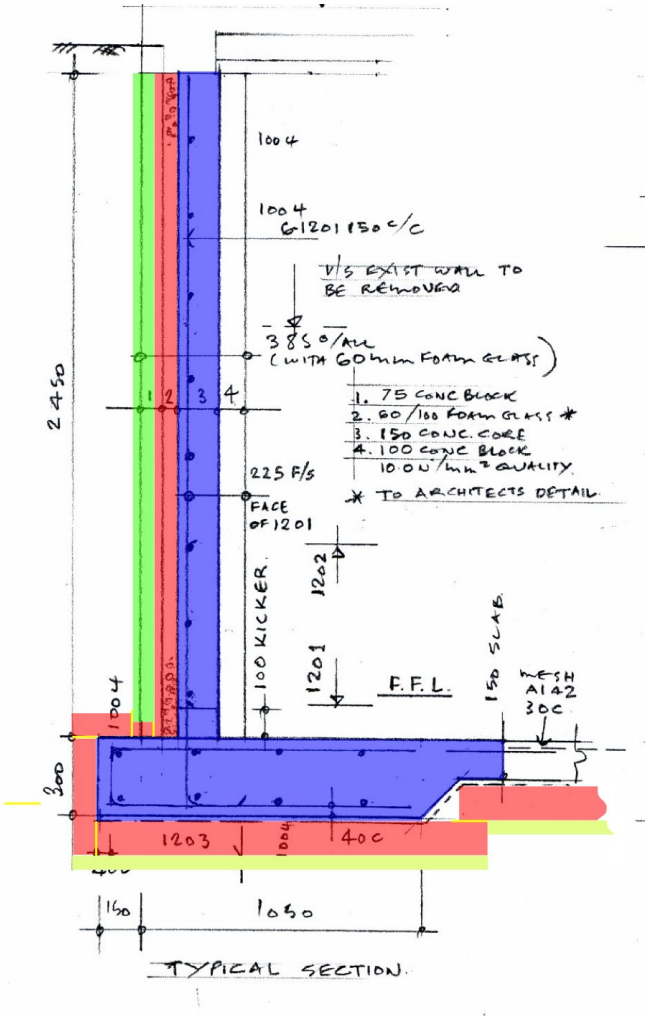


Illustration 1: Relationship between structural elements and Foamglas

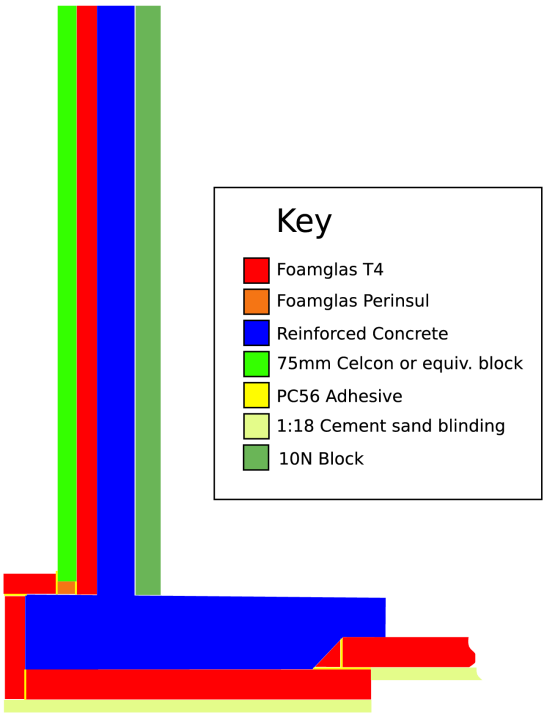
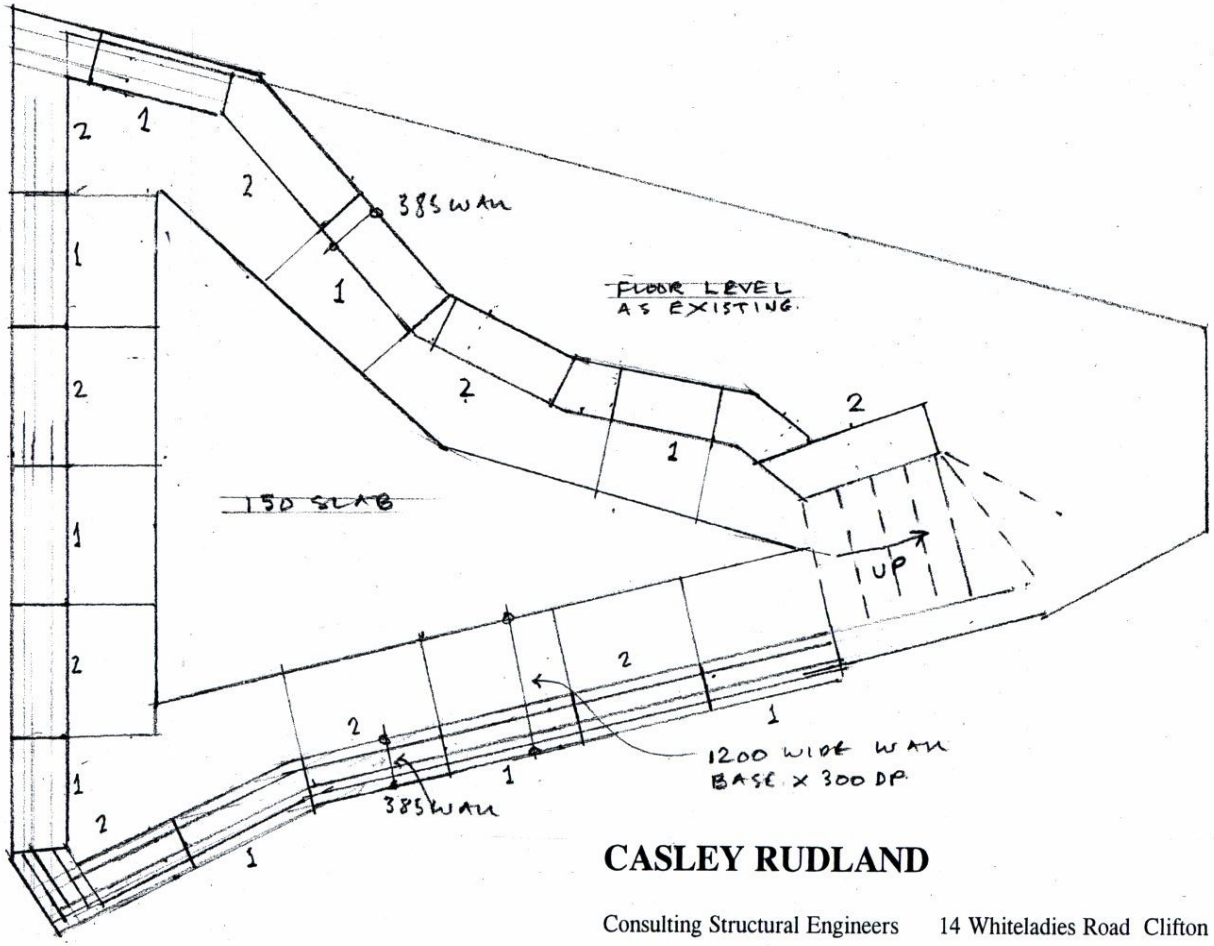


Illustration 2: Foamglas cladding on retaining wall panel

Illustration 3: Basement retaining walls

NOTES

1. THIS DRG TO BE READ IN CONJUNCTION WITH ARCH DETAILS
2. FOR DETAILS OF RET. WALLS SEE DRG NO /02



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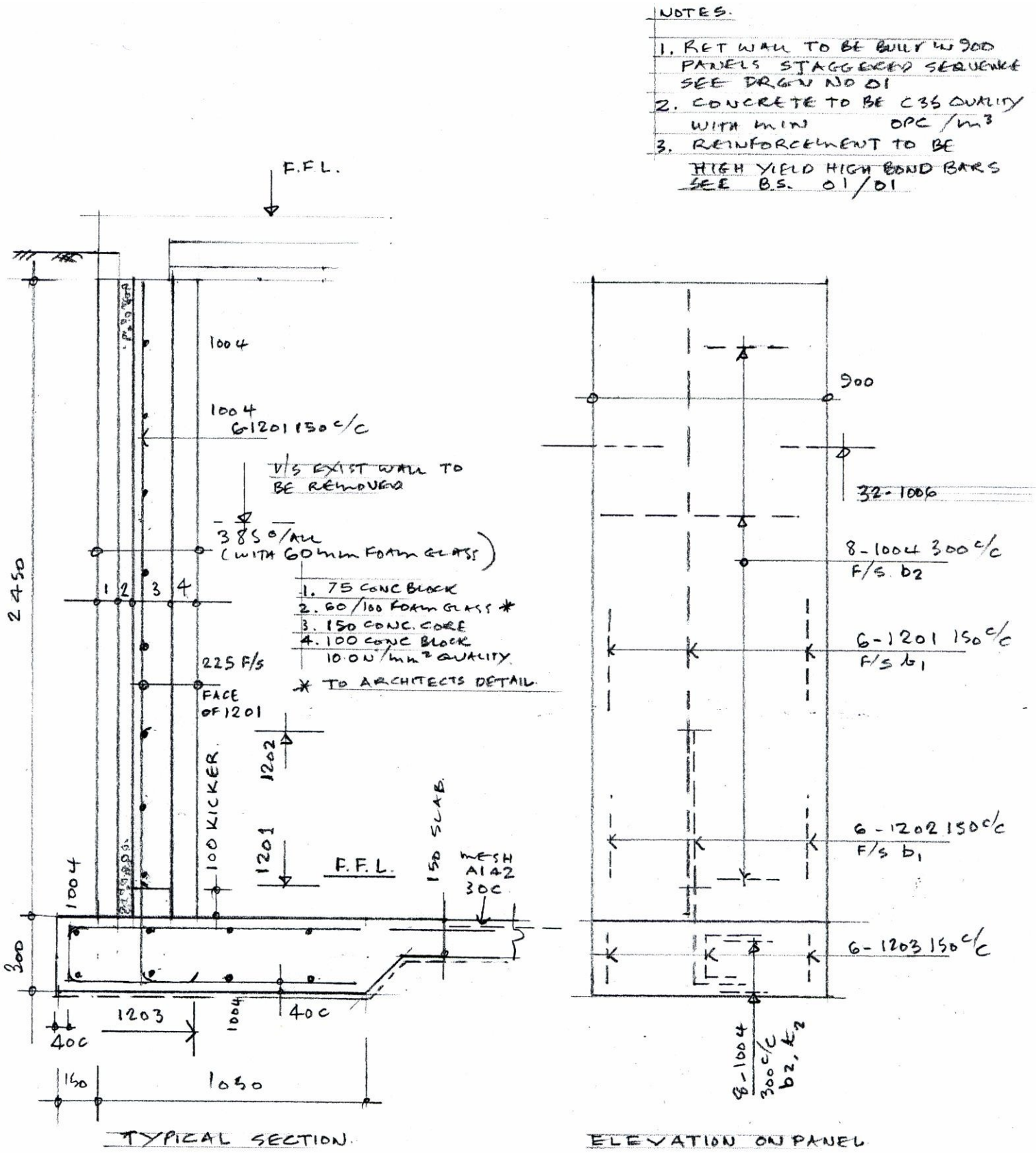
PROJECT: Garage Conversion Sydenham Road Cotham	Date: March 2007	Project No: 1060703
TITLE: Basermant Plan	Made by: DV	Sheet No: 01
	Checked by: CR	Scale: 1:50



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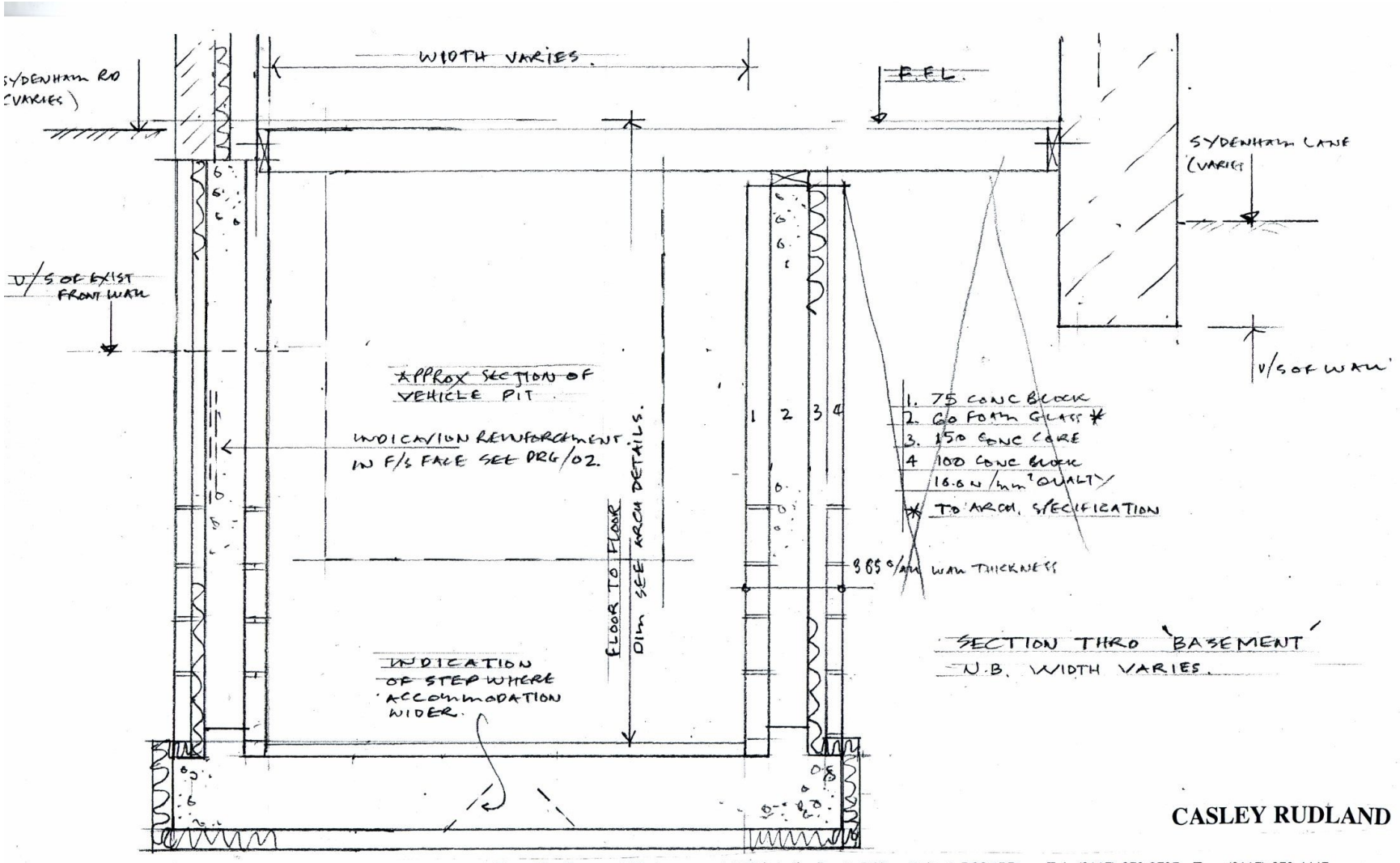
PROJECT: Garage Conversion Sydenham Road Cotham	Date: March 2007	Project No: 1060703
TITLE: Retaining Wall Details	Made by: DV	Sheet No: 02
	Checked by: CR	Scale: 1:20

Illustration 4: Retaining wall sections

Illustration 5: Cross section through basement



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PROJECT: Garage Conversion Sydenham Road Cotham	Date: May 2007	Project No: 1060703
TITLE: Section Thro' Basement	Made by: DV	Sheet No: 04
	Checked by: CR	Scale: 1:20